

ESPC Basics



What are ESPCs?

- The ESCO:
 - Provides design, acquisition, financing, installation, testing, operation, and where appropriate, maintenance and repair, of ECMs
 - Incurs the costs of implementing the ECMs, including energy audits, acquiring and installing equipment, and training personnel
 - In exchange for a share of the resulting savings during the term of the contract
 - Guarantees cost savings to the Government.
- The customer (agency/site)
 - Pays the ESCO over the term of the contract out of the savings resulting from the project.

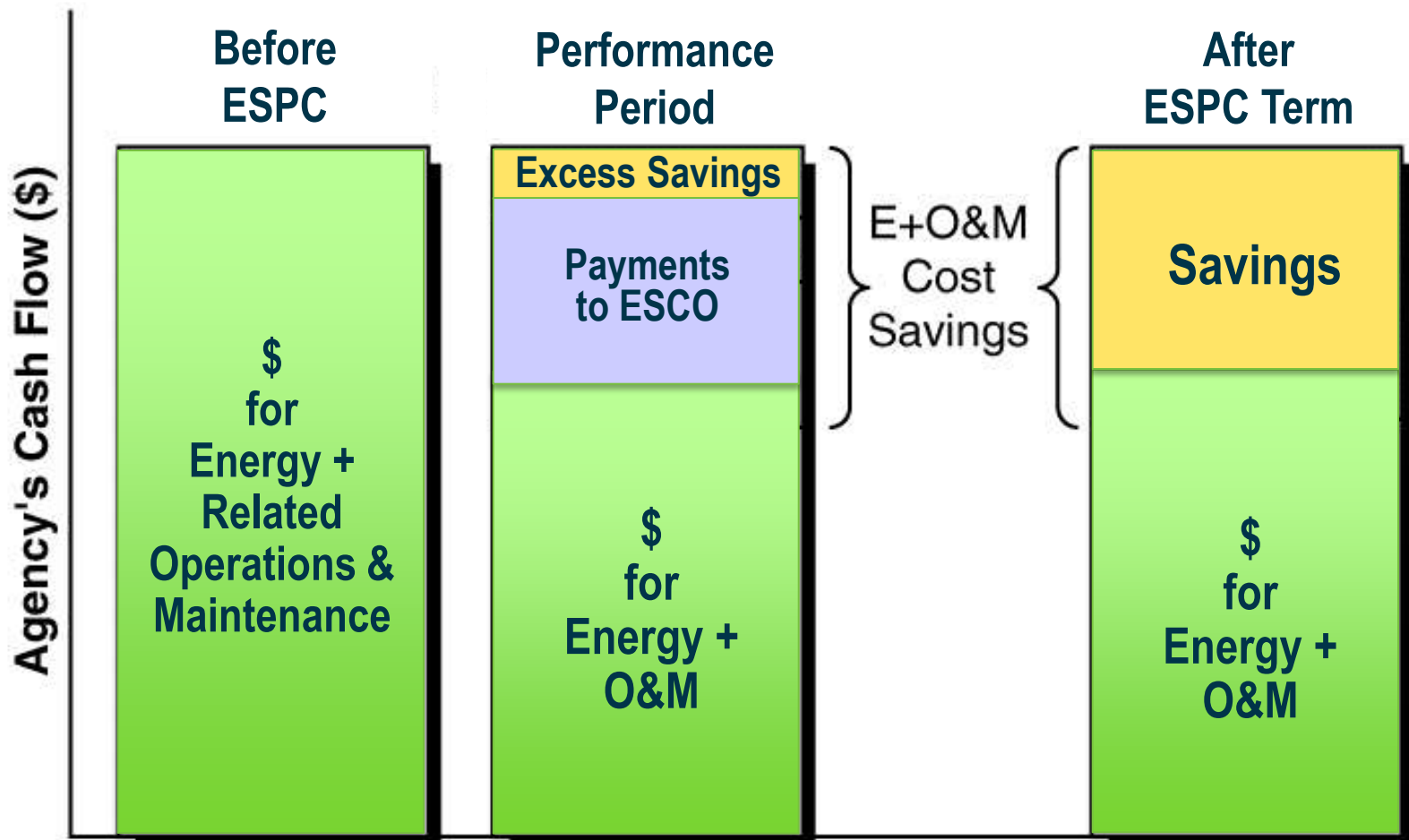
Key Features of ESPCs

- Purpose: Achieve energy savings & ancillary benefits
- Flexible funding – private financing & appropriated funds
- No agency payments until new equipment is operating
- Cost savings are guaranteed to exceed payments
- Performance of ECMs is guaranteed
- ESCO may perform Operations & Maintenance (O&M)
- Measurement & Verification (M&V) is required
- Maximum term 25 years

ESPCs are Budget-Neutral

Reallocate the Government's Utility Bill:

- ◆ Stop paying for waste and pollution ◆ Start paying for efficiency ◆



ESPC Authorities

- National Energy Conservation Policy Act, Title VIII Shared Energy Savings (1986)
- Energy Policy Act of 1992 (EPACT 1992)
- DOD Authorization Act 2004
- Energy Policy Act of 2005 (EPACT 2005)
- Energy Independence & Security Act (EISA 2007)
(42 USC 8287 – ESPC statutory authority)
- 10 CFR 436 Subpart B – Implementing Regulations
- National Defense Authorization Act FY11
(applies to all DOD and civilian agencies)
- Federal Acquisition Regulations Part 23
- Executive Order 13423



Federal Energy Goals – Sustainability & Energy – EISA, EO 13423, EO 13514

- Reduce facility energy use by 30% (relative to 2003) by end of 2015
- Increase use of renewable energy to 7.5% by 2013
- Reduce water use by 16% by end of 2015 (relative to 2008) and 26% by 2020
- Reduce direct greenhouse gas emissions
- Meet Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings for at least 15% of buildings >5,000 sq ft by 2015
- <http://www1.eere.energy.gov/femp/pdfs/sustainabilitycrosswalk.pdf>

What Are The Benefits of Using ESPCs?

- Fund energy improvements with minimal or no up-front capital costs
 - Preserve appropriations for other needs
- Obtain long-payback ECMs by bundling with short-payback ECMs
- Operations, maintenance & repair can be included in contract
- Take advantage of ESCO experience
- They deliver guaranteed improvements, savings, and performance

Use ESPCs to Reduce Government Risk

- Fixed-price contract reduces price risk on design-build project
- Performance guarantees reduce equipment performance risk
- Mandatory M&V reduces energy savings risk
- New equipment may enhance energy security
- Reducing energy use reduces impact of future utility price hikes

Flexible Funding —

- Authorization
- Strategic Use of Appropriations & Financing



Authorization for Combining Financing and Appropriations in ESPCs

- EISA 2007 §512
 - May use any combination of appropriated funds and private financing under an ESPC
 - EISA 2007 §432 reinforces authorization for “combined funding for the same measure”
- NECPA (42 U.S.C. § 8287a) still applies:
 - ESPC payments may come only from funds appropriated or otherwise made available for the payment of energy, water, or wastewater treatment expenses (and related O&M/R&R expenses).

ORNL Study: Quantitative comparison of three options for use of appropriated funds in energy management:

1. Directly fund short-payback ECMs
2. Directly fund long-payback ECMs (that do not fit into a financed project)
3. Apply as one-time up-front payment to reduce financed amount

Study Conclusions

- Best strategy
 - Use private financing to fund as many measures as possible, starting with shortest paybacks
 - Use available appropriations as up-front payment for financed project
- Directly funding short-payback ECMs with appropriations is not a good strategy –
 - Limits investment, limits savings, costs more, limits agency's options

DOE-FEMP ESPCs

- Indefinite-delivery, indefinite-quantity (IDIQ) contracts awarded competitively to ESCOs by FEMP to streamline the process
 - Agencies negotiate, award and administer task orders under these IDIQs
- Can be used for federally owned agency facilities anywhere in the world



Scope Covers Energy Conservation Measures (ECMs) from A to Z

- Boiler and chiller plants
- Energy management control systems
- Building envelope
- HVAC
- Chilled/hot water and steam distribution
- Lighting
- Electric motors/drives
- Refrigeration
- Distributed generation
- Renewable energy
- Energy/utility distribution
- Water and wastewater
- Electrical peak shaving/load shifting
- Rate adjustments
- Energy-related process improvements
- Commissioning
- Advanced metering
- Appliance/plug load reductions

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15 Years of DOE IDIQ ESPC Results (1998-2012)*

- 278 FEMP ESPC projects have been awarded by 25 agencies
 - Total project investment: \$2.68B
 - Total savings: \$7.1B
 - Energy savings: 347 million MMBtu
- *Statistics as of Nov 2012
- M&V annual reports show that 105% of guaranteed cost savings were reported



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Keep In Mind

- Opportunity cost is our enemy—keep the big picture in mind.
 - Inaction is very costly
 - Delay is costly especially with financed project
- Despite training, you're not on your own!
 - FEMP team supports every project
- Keep DOE-FEMP on speed dial
 - We're never far away
 - We have an interest in every project throughout term

Review Questions

Q1: DOE-FEMP ESPCs are _____ (type) contracts awarded by DOE to ESCOs to streamline the ESPC process.

A: IDIQ, indefinite-delivery, indefinite-quantity

Q2: What's the maximum term of a federal ESPC task order?

A: 25 years

Q3: Besides cost savings, what must be guaranteed?

A: Performance of ECMs and standards of service

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Q4: What is the geographic scope of the DOE-FEMP ESPCs?

A: Worldwide

Q5: Can you name an ECM that is **not** allowed under DOE-FEMP ESPCs?

A: No

Q6: Where does the ESCO get the capital to fund construction?

A: Borrows from financier/lender

Q7: Is M&V negotiable or required in federal ESPCs?

A: Required by law and contract

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Next: Module C
Phase 1, Acquisition Planning ►

